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ADDRESS.

A LOST ART OF MEDICINE.

An Address delivered before the American Medical Association

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WE here reproduce in full, with the exception of some preliminary opening matter, the address of Prof. Gross before the American Medical Association. After contrasting the present disuse of venesection with the universal employment of it in his boyhood, and asserting that bleeding is emphatically one of the lost arts, the venerable Professor continued as follows:

How this extraordinary change in sentiment and practice was brought about, by what influence, agency, authority, philosophy, logic, or mode of reasoning, is a matter worthy of brief inquiry. The causes, so far as they are patent to my mind, are mainly four: First, the influence or tyranny of authority, soon passing into more or less extensive fashion; secondly, the indiscriminate employment of the lancet in the days of what has been termed, not inappropriately, the Sangrado practice; thirdly, a more accurate knowledge of the nature and seat of diseases; and, lastly, the use of certain remedies unknown a third of a century ago, but now of general, if not universal, resort, in the treatment of inflammatory affections.

1. The influence of authority annually slays millions of human beings. Its pernicious effects upon human life, in its individual and collective relations, are felt in every direction; in the construction of our dwellings, in our habits and occupations, in our dress, in our social entertainments, in our amusements, in our food and drink, and in a thousand other ways. Of its malign influence in our profession examples daily fall under our observation, as the result of pernicious doctrines and practices. Superstition and fanaticism have kept the world in a state of intellectual bondage from the earliest records of society down to the present moment. The spiritualism of the present day has its counterpart in the witchcraft of three centuries ago, fortunately without the hangman's halter. Every age has its peculiar absurdities, characteristic of the minds of some of its people. Mesmerism deluded thousands of persons. The metallic tractors of Perkins enjoyed for a time a world-wide notoriety. Homœopathy is still at work in deluding the world. Clairvoyance has many devout adherents. Berkeley, in the middle of the last century, effected many wonderful cures with the aid of his tar-water. For upwards of one hundred years the lancet enjoyed unlimited sway. Everybody was bled. Surgeons, during the last dozen years, have had carbolic acid on the brain as a dressing in wounds and other injuries. Broussais, Cookeism, and the blue pill of Abernethy, each had a reign of at least a quarter of a century. For an equally long period the medical mind of Italy was agitated by the tartar-emetic treatment of Rasori and his followers. Thompsonianism, or the lobelia and cayenne-pepper treatment, is not yet entirely extinct on this continent, although its days were numbered long ago. For nearly a third of a century the doctrine of a change of type in disease has tyrannized over the minds of medical men, and exerted a controlling influence upon their practice. Of all these delusions, the latter, often called Toddism, after Dr. Todd, its author, has exercised the most pervasive and baneful effects upon civilized society. Ensconcing itself behind a false position, it has literally enslaved the medical world, entrapping alike the wise and the foolish, and sweeping over human life with a force equal to that of the fiercest and most destructive hurricane. Unlike the doctrine of sthenic and asthenic diseases of Dr. John Brown, who in the latter part of the last century enjoyed such a wide celebrity as a medical reformer, it assumes that all maladies are of a low type, imperatively demanding the use of stimulants for their successful management. It countenances no half-way measures. The patient must be upheld by stimulants or he must die. Now and then, perhaps, a few leeches may be tolerated, but only in very exceptional cases, where there is not too much depression of the vital powers. Who and what Dr. Todd, the author of this system of medicine, was, it would be needless to inquire. Everybody knows that he was one of the ablest writers and clinical teachers whom this century has produced; but that he was a profound thinker, I doubt; and it is well to bear in mind that the class of patients at King's College Hospital, London, of which he had charge, were persons in the lower walks of life, broken down by overwork, privation, and various forms of intemperance, and therefore unable to bear depletory remedies. Such patients as Dr. Todd had are to be found in the wards of every eleemosynary institution in Europe and in this country. It was from a study of this class of cases that this famous man, in an evil hour, deduced the absurd doctrine of a change of type in disease. I say absurd, for if there ever was anything absurd this doctrine most assuredly deserves that name. Who, that has any knowledge of the human constitution as it is daily met with in our intercourse with our fellow-citizens, in the various pursuits of life, will lend credence to such an idea,—I had almost said to such a slander? I assert, without the fear of successful contradiction, that man's power of endurance in health and disease is not one particle less than it was fifty years ago, when depletory measures of every form were the order of the day; when, in fact, it would have been deemed derogatory to a physician's character to let a patient die without the aid of such remedies. The exploits performed during our late terrible war alone are sufficient to settle this question. Never, since man battled with man for national supremacy, were there so many rapid, laborious, and brilliant marches executed in so short a time as there were on both sides of the line. The exploits of the soldiers of Alexander, Hannibal, Cæsar, and Bonaparte fade into comparative insignificance by the side of those of some of our generals. Our laborers, farmers, miners, hewers of wood, carriers of water, mechanics, artisans, and professional men, evince no evidence of decline in muscular power or mental endurance. Our sailors are as hardy a race of men as they were in the days of Sir Francis Drake or Captain Cook.

If we look at the habits and modes of life of the people of the present day, it will be found, if I do not greatly err, that they do not differ, in any essential manner, from those of a third of a century ago. The different classes of men and women, in city and in country, live very much as they did in my boyhood, using the same kind of food and drink, pursuing similar occupations and amusements, and exercising as much control over their appetites and passions generally as their fathers and mothers. If there are any differences in any of these particulars, they are certainly not well marked, nor so radical in their character as to diminish, in any material degree, the power of endurance of our people in health and disease. On the other hand, owing to the more extensive cultivation of our soil, the destruction of our forests, the draining of our

marshes, and the greater attention paid to the study of hygiene, our people, especially those in the rural districts, are much more exempt from the diseases caused by the noxious exhalations from the earth's surface, so prevalent in newly-settled countries, and so pernicious in their effects upon the constitution, than they were in the early days of my white- and bald-headed contemporaries.

Do not men during accidents and surgical operations, and women during parturition, often lose enormous quantities of blood, and yet frequently make excellent recoveries? In epistaxis, hæmoptysis, and hæmatemesis, this fluid is often largely poured out, and yet it is seldom that we hear of a person dying from the effects of its loss.

In the face of such facts as these, and a hundred others that might be adduced if time permitted, the doctrine of a change of type in disease must fall to the ground as utterly untenable.

The influence of fashion is not limited to our profession. We all recollect how the crinoline of the French Empress, invented to conceal a condition of which most ladies are so proud, enslaved the female mind, until every woman, married and single, considered it as an indispensable article of dress. A sofa, however spacious, was hardly long enough for a woman thus arrayed to sit upon. How the fashion has changed within the last six or eight years is familiar to everybody. Now the dress is so narrow as to show the outline of the person, and compel the greatest care in progressing lest the fair wearer should trip and tear her garments. Even diseases occasionally become fashionable. When it became known that Louis XIV. was laboring under anal fistula, the disgusting malady became at once the fashionable ailment of his debauched court. The use of enemata was cultivated as one of the fine arts in France in the time of Molière, who lashed the faculty without mercy for its follies and extravagances.

Second.—The indiscrimate employment of the lancet in former days did much to bring blood-letting into discredit, not only with the better thinking class of physicians, but the public at large. "We cure the sick," says Gui Patin, a professor in the Royal College of France, "when over eighty years old, by blood-letting, and also infants of not more than two or three months, with as much success and as little inconvenience." Rush, the great champion of this operation on this side of the Atlantic, bled indiscriminately and remorselessly at all periods of life, the young, the middle-aged, and the old; in all kinds of diseases, in the eruptive fevers, in fever and ague, in puerperal fever, in inflammations, in injuries, in hemorrhages, and even in anæmia, often taking immense quantities of blood, and repeating the operation six, eight, or even a dozen times in the same patient. In short, he and his followers used to bleed in every possible disorder until, in many cases, no more blood would flow, because there was none left. That such a practice would at length work out its own destruction is what might reasonably have been expected. It rang its own knell.

Third.—That we are much better acquainted with the nature and treatment of disease than our fathers were is a fact so universally accepted as to require no argument in its support. Our progress in this respect, during the last forty years, has simply been marvellous; and to nothing are we so much indebted for these improvements as to the study of pathological anatomy and histology, and the astounding developments of chemical science.

Fourth.—That the treatment of disease has been greatly simplified within the period above specified is familiar to every member of the profession. Homœopathy, by the absurdities of its doctrines and primitive practices, long ago demonstrated to the world that most of its cures are effected spontaneously, through nature's restorative powers alone, while the patient's mind is medicated with the decillionth part of a drop or a grain of medicine; and in comparatively recent years two eminent medical philosophers, Professor Bigelow, of Boston, and Sir John Forbes, of London, showed us, by a series of admirably-conducted observations, that certain diseases, as smallpox, scarlatina, measles, typhus and typhoid fevers, are self-limited in character, and therefore not to be materially if at all abridged in their course by any plan or means of medication whatever. A third of a century ago the only so-called depressants, aside from the use of the lancet, were tartar emetic, calomel, and digitalis, the latter of doubtful efficacy in any case, and the first often exhibited without due discrimination. Of aconite and veratrum viride, now so universally employed as antiphlogistic agents, we were totally ignorant. These two medicines, as I shall endeavor to prove by-and-by, although frequently of immense service in the treatment of inflammatory affections, are far, far inferior to blood-letting.

Believing that these are the principal, if not the only, reasons which have led to the abandonment of blood-letting as a therapeutic agent, I propose now to speak of the operation itself, and to point out, first, the classes of diseases to which it is more especially applicable; secondly, the period at which it should be performed to yield the greatest amount of good; and, lastly, its mode of action.

Blood may be abstracted in different ways, as, first, by venesection; secondly, by leeches and cups; thirdly, by incision, scarification, or puncture; and fourthly, by arteriotomy. The latter operation is so difficult of performance that few practitioners are willing to attempt it. There are cases, as in violent inflammation of the brain, eye, and ear, in which it is supposed to exercise a peculiarly beneficial influence; but, generally speaking, it is quite certain that venesection, if properly executed, answers every purpose, even in the affections here specified. Similar remarks are applicable to bleeding at the jugular vein, also usually a difficult and, sometimes, even a dangerous operation.

The diseases to which blood-letting is more particularly applicable are the different inflammations, acute and chronic; general bleeding being best adapted to the former, and local to the latter. Hippocrates and his immediate followers bled largely in pneumonia and pleurisy, and Sydenham, Rush, Louis, Drake, and many others often took immense quantities of blood in the treatment of these maladies. In acute inflammation of the eye, in robust subjects, bleeding is often indispensably necessary to save the affected organ. Who would hesitate to draw blood largely, under similar circumstances, in acute inflammation of the brain and its envelope, in acute pericarditis or endocarditis, in hepatitis, splenitis, gastritis, enteritis, peritonitis, cystitis, metritis, or orchitis? Stricture of the urethra would be much less frequent if young men laboring under severe gonorrhœa were freely bled at the beginning of the attack. In traumatic affections of the joints, unattended with loss of blood or severe shock, the abstraction of blood would often prevent anchylosis, so common under the present system of treatment. The spasm which is so often present in recent fractures, especially in those of the leg and thigh, is more readily controlled by venesection, followed by a hypodermic injection of morphia, than by any other agent I have ever tried.

In chronic inflammation, blood-letting is often an indispensable remedy. Even the most ultra advocate of the stimulant method of treatment will hesitate to employ it when destructive action is gradually but surely undermining structure and function. The abstraction of five, eight, or even ten ounces of blood in chronic

pneumonia and pleurisy, especially when associated with severe pain and obstructed respiration, often acts like a charm, relieving suffering and promoting the beneficial action of other measures. In chronic ophthalmia a few leeches applied to the fore part of the temple, on a line with the commissure of the lids, frequently produce the happiest result. But I will not consume your time by an enumeration of the different cases of chronic inflammation in which blood-letting might be advantageous. What I have said respecting the lungs, pleuræ, and eye is equally applicable to other structures, and needs no further elucidation here.

It requires no labored argument to show that general bleeding can be successfully practised only at the beginning of an acute disease, or during its earlier and gravescent stages. Performed at a later period, when the morbid action is fully established and the affected tissues are inundated with inflammatory deposits, it cannot fail to do harm by robbing the system of the strength so much needed to carry on its vital processes. A copious bleeding at the outset of a violent inflammatory disease is gold; but at its height, lead; or, to express myself more clearly, life in the one case, death in the other.

Secondly.—To draw blood to the greatest possible advantage, the quantity should be measured, not by ounces, but by the impression it makes upon the system, as denoted by the pallor of the countenance, the reduction of the heart's action, the softened state of the pulse and skin, the abatement of pain and of other symptoms, as headache, thirst, and restlessness, so universally present in all severe inflammatory attacks. To insure this result in the most speedy and decided manner, the blood should be drawn from a large orifice in a large vein at the rate of two and a half to three ounces in the minute, while the patient is in the erect or semi-erect posture. If the body be recumbent during the operation, a much larger quantity of blood will be required to be drawn to produce the desired effect than when the reverse is the case. While, therefore, the bleeding should be spoliative, care should be taken not to waste the fluid unnecessarily.

To prevent undue reaction after the operation, the bleeding should not be carried to complete syncope, but merely to an approach to this condition, the effect of the operation being carefully watched by a reference to the countenance and the pulse, lest it should exceed the proper limits, and thus do harm instead of good. Violent reaction, however, in any case, after the abstraction of blood, may generally be effectually prevented by a full dose of some diaphoretic anodyne, as ten grains of Dover's powder with one-fourth of a grain of morphia, given immediately after the operation.

Respecting the repetition of the operation, every case must, so to speak, make its own rules. If, after a very copious bleeding, the symptoms rapidly reappear in all or nearly all their former intensity, the operation should at once be repeated, either by reopening the original orifice or by selecting another vein. In urgent cases, as in violent pneumonia, pleurisy, peritonitis, cerebritis, or endocarditis, the operation may often be repeated several times in rapid succession. Under such circumstances, the practitioner must, like a wary general, make forced marches, and follow up his successes, not waiting until the enemy has intrenched himself behind his works, but striking heavy blows while he has the opportunity.

But I shall be told that such heroic treatment must inevitably induce serious debility. I grant it will; but in turn I ask, will the disease, if neglected or permitted to progress, not also cause debility,—debility, perhaps, of the very worst kind,—debility from over-action of the heart, imperfect supply of nerve-fluid, deranged circulation, impaired function of vital organs, and, above all, from disordered structure from inflammatory deposits? The enlightened practitioner bleeds to save tissue, and to prevent the morbid action from running riot. He repairs strength, when the time for it arrives, by making blood with nutritious food and drink, and thus speedily sets the machinery of life again in motion. The timid, hesitating practitioner, the opponent of bleeding, on the contrary, although he may employ the same restoratives, uses them inopportunely, and thus allows the debility caused by his treatment to linger for an indefinite time, provided the patient is so fortunate as to survive the first onslaught of his disease.

Before I proceed to speak of local bleeding, let us briefly inquire into the mode of action of venesection, or, in other words, how the removal of blood from the system affords relief in inflammatory affections. This question can be easily answered. In the first place, the abstraction acts spoliatively, diminishing, as the name implies, the quantity of blood, both in the part and system. Secondly, it weakens the power of the heart, and thereby prevents it from sending the blood with the same force and velocity into the suffering structures. Thirdly, it unlocks all the emunctories, and thus promotes secretion. Fourthly, it disgorges the vessels at the seat of the disease, restores the circulation, and places the absorbent vessels in a better condition for the removal of effused matter. And, last, but not least, it favors the action of other remedies, as purgatives, diaphoretics, diuretics, and anodynes.

But it will be said that all these effects may and can readily be induced by the agency of other remedies, as aconite, veratrum viride, digitalis, mercury, and tartar emetic, and that, too, at much less cost to the system. That these articles are powerful depressants, lowering the heart's action and promoting secretion, no one at all acquainted with their virtues will question; but I deny that they exercise the same beneficial impression upon the vessels at the seat of the inflammation. When blood is drawn freely from a large vein at the bend of the arm, from a large orifice, to an approach to syncope, the vessels at the seat of the morbid action are unloaded, often to such an extent that the affected structures do not exhibit any marked difference in color from those in their immediate vicinity. Thus, for example, in violent conjunctivitis the mucous membrane, the seat of the disease, always, under such circumstances, presents a perfectly blanched appearance, however red and engorged it may have been the moment before. Now, what occurs in the eye, in such a case, may reasonably be supposed to take place in any other part of the body when a patient is bled to a similar extent. In pleurisy, one of the immediate effects of the copious abstraction of blood is a mitigation of the torturing pain which forms so prominent a symptom in this disease, due, evidently, to the diminished calibre of the vessels in the pleura, previously in a state of complete repletion. Has any one ever witnessed such an effect from the exhibition of aconite, digitalis, veratrum viride, or tartar emetic? Never. No matter how these articles may be administered, whether singly or variously combined, they are simply depressants, not depressants and evacuants, as the abstraction of blood from a vein or an artery; there is no blanching of tissue from their use, no unloading of distended and crippled vessels,—indeed, no direct appreciable effect of any kind.

The more recent researches in pathological histology furnish a hint not easily to be mistaken as to the most salient treatment of inflammation in its earlier stages. The leading indication is to restore the paralyzed capillaries to their normal tonicity, so as to prevent structural changes in their walls, and facilitate the outward passage of the white globules with which they are choked. It is now well known that in every inflamed area there is marked hyperæmic distention of the blood-vessels, which are often crowded to their utmost capacity

with leucocytes, which emigrate through the vascular walls, and, in conjunction with the effused blood-liquor, constitute the most important elements in inflammatory deposits. Hence the object of treatment should be to restore the capillaries to their normal calibre through the artificial induction of contraction of their walls,—an effect which can be brought about, as is daily witnessed in many of the external inflammations, by cold applications, which, as is well ascertained, produce reflex contraction of the vessels. In inflammation of the more deeply-seated organs and tissues, however, this object can only be attained by spoliative bleeding, whereby the affected capillaries are relieved of their contents. In this way only can their tonicity be restored, the further effusion or migration of cell-elements restrained, and the absorption of existing deposits favored.

Another effect of bleeding, not to be overlooked in this discussion, is the diminution which it causes in the quantity of fibrine and white globules, so remarkably augmented in inflammatory affections. This change, of which I have witnessed many examples, was beautifully illustrated in the case of a young man, nineteen years of age, whom I attended along with the late Dr. Charles Woodward, of Cincinnati, on account of a severe attack of pleurisy. Blood was drawn on three consecutive days, the first bleeding being performed about thirty-six hours from the commencement of the attack. The fluid, amounting to nearly a quart, was not only greatly buffed, but cupped on both sides of the crassamentum, as is shown in the specimen which is still in my possession. At the second operation the fluid was buffed, but not cupped; and at the third it was merely a little sizy, all pain and active inflammation having by this time disappeared. If such effects follow the use of the articles above mentioned, I am uninformed of the fact.

In leeching and cupping, blood may be taken directly from the affected structures, or indirectly, as when they are practised at a distance from the seat of the inflammation; in the latter case the effect, if carried to a great extent, is similar to that produced in venesection, but generally much more tardy, and, therefore, in the main, not so efficacious. When the tissues are divided, as in incisions, scarification, or puncture, the vessels are directly drained of their contents, an operation often followed by great, if not permanent, relief. Illustrations of the efficacy of this mode of depletion are daily witnessed in tonsillitis, in erysipelas, ulcers of the extremities, inflammation of the uterus, and in impending mortification, not to mention other affections.

I have said that general bleeding can be successfully practised only at the beginning of an inflammatory attack, a fact which, I repeat it, is not to be lost sight of in weighing the propriety of such a procedure. Let it be borne in mind also that bleeding is not to be practised indiscriminately, but judiciously, and with proper regard to the condition of the system. Our fathers grievously erred, because they bled in every stage of disease, and in all states of the system, the plethoric and the anæmic, the strong and the weak. Of course there were exceptions, but as a rule this was the practice; the harm, hence, as a natural consequence of the abuse, the abandonment of the treatment. It is within the recollection of all the older members of this Association when the practice of medicine in this country and in Great Britain was limited to the lancet, calomel, digitalis, opiates, and tartar emetic, with gruel and chicken-broth as the chief diet during sickness. I well remember the time when the use of cold water was interdicted as highly improper, especially in the treatment of the so-called eruptive fevers, and when ventilation of a sick man's chamber was considered as fraught with danger. Bleeding will again come into fashion; history constantly repeats itself, and knowledge runs in a circle. No sensible man can fail to read the signs of the times; but it will not be indiscriminate bleeding, but bleeding performed for a reason, early, and, if need be, freely, to save tissue and promote resolution; in the robust and plethoric, in the young and middle-aged, not in the weak, the anæmic, the intemperate, the broken-down, and the decrepit. Practitioners during the last third of a century have labored under a delusion and a dream, from which they are gradually emerging to a sense of their duty; and, although I am not a prophet or the son of a prophet, I venture to predict that the day is near at hand, if indeed it has not already arrived, when this important element of treatment, so long and so shamefully neglected, will again become a recognized therapeutic agent, and will thus be instrumental in saving many lives, many an eye, many a lung, many a joint, and many a limb.

But bleeding should not be restricted to the treatment of inflammatory diseases. There are other affections in which it may often be practised with the greatest benefit. In puerperal convulsions, attended with a plethoric condition of the system, copious venesection, promptly followed by the administration of a full anodyne, either alone or in union with chloral and bromide of ammonium, and the application of leeches to the temples and cold to the head, is the sheet-anchor of our hopes, a positive *sine qua non* to success. An experienced and learned member of this Association, Dr. J. Fordyce Barker, recently called attention to this subject in a paper characterized by strong sense and great practical acumen, worthy of his high position as an accomplished gynæcologist. I believe, indeed, that the practice thus set down is the one now generally, if not universally, adopted in the treatment of this dangerous disease, as it was in the time of Dewees and his more enlightened contemporaries. In certain forms of apoplexy the judicious employment of the lancet cannot be too strongly insisted upon, especially in comparatively young and vigorous subjects. Blood in this disease is often taken with leeches when it ought to be taken with the lancet. In asthma, bleeding is frequently of inestimable value, in relieving engorgement and spasm of the lungs, the causes of the terrible dyspnœa so often present in the more aggravated forms of the disease. I recall to mind the case of a lady who was the subject of asthma from the age of fourteen up to that of eighty-six, when she died of pneumonia, whom I repeatedly bled with the greatest advantage in attacks of this kind, which nothing else could relieve. In another case, that of a tall, slender gentleman of this city, nearly eighty years of age, in which a severe attack of asthma was complicated with great congestion and slight inflammation of the lungs, the abstraction of less than ten ounces of blood by the lancet led to a speedy convalescence and a complete cure. I verily believe that if this gentleman had not been bled he would have died. In certain forms of phthisis, venesection, judiciously employed, is frequently productive of great benefit. I allude more particularly to the chronic variety of the disease, kept for years in abeyance by great care and a properly regulated regimen. I remember the case of the late Mr. Benjamin Drake, of Cincinnati, a brother of the great professor, who labored for many years under disease of the lungs, associated with tubercular deposits, the more urgent symptoms of which were always promptly relieved by the loss of eight to sixteen ounces of blood by venesection. I have always felt satisfied that his life was materially prolonged by this treatment. Dr. Rush was in the habit, as Sydenham had been before him, of bleeding in every case of phthisis attended with a hard pulse, or a pulse rendered weak by the laborious transmission of blood through the lungs. In one of his cases he bled eighteen times in two weeks, and in another, fifteen times in six weeks, with the happiest

effect. I do not cite these instances as examples for our imitation, but simply to show that a system borne down by disease may react favorably under what to us of the present day appears as a most heroic measure.

Forty years ago it was customary in protracted labor, dependent upon rigidity of the uterus and the perineum, to bleed in order to relax the parts and expedite the expulsion of the child. Dewees, in such cases, often took large quantities of blood, especially in young, robust, primiparous women, and occasionally even repeated the bleeding. I well remember that this was the general practice for a number of years after I entered the profession. Why it has fallen into desuetude it would be difficult to tell. The abstraction of blood under such circumstances was always followed by the exhibition of a large anodyne, under the influence of which the labor usually progressed rapidly to a favorable issue, without subjecting the poor woman to undue torture, the danger of lacerating the perineum, or the necessity of applying the forceps, the use of which is now so common among all classes of accoucheurs.

The plethoric condition of the system so frequently met with in young, robust, pregnant women is generally promptly relieved by the abstraction of twelve to fifteen ounces of blood, and certainly there is no more rational remedy in such circumstances, especially when the redundancy of blood is accompanied by dizziness, vertigo, or headache. Thirty years ago there were few women that were not bled once or twice during utero-gestation on account of the symptoms, and I do not know that I ever heard of one that was injured by the practice.

Certain forms of hysteria and epileptic convulsions, dependent upon congestion of the nervous centres and a redundancy of blood in the system, are generally materially benefited by venesection. The relief in the former affection is often prompt and permanent, as I can testify from personal experience.

In the convulsions of infants blood-letting is frequently of signal service. In that form of the disease which follows upon the more severe attacks of cholera, so rife in our hot summer months, and which are manifestly due to over-excitement of the brain, as is shown by the excessive heat of the head, the flushed condition of the countenance, the suffused eye, the intense thirst, the incessant restlessness, the intolerance of light and noise, and the twitching of the muscles, the abstraction of two to two ounces and a half of blood from the arm, in a child from one to two years of age, not only, in many cases, promptly arrests the vomiting and other distressing symptoms, but protects the brain from more serious mischief, and thus places the system in a condition for speedy convalescence.

In what is called hay-fever, a good bleeding sometimes affords immediate alleviation of all the disagreeable suffering incident to that complaint, as dyspnœa, violent sneezing, nasal catarrh, tightness in the frontal sinuses, headache, and horripilations, or chilly sensations along the course of the spine. I recollect one case which came under my observation many years ago, in a clerical gentleman, thirty-three years of age, who, on being largely bled one Sunday soon after the close of his religious services, was completely cured for that season; and, although the malady recurred during several consecutive summers afterwards, the attacks were always comparatively light.

Cases have been related of great benefit afforded by bleeding in uræmic coma, attended with unconsciousness, dilated and fixed pupils, convulsions, a highly albuminous condition of the urine, and excessive prostration of the system. The blood at first issued feebly, but gradually the stream increased in volume, the blood assumed a brighter hue, the pulse rose, the convulsions ceased, consciousness returned, and the patient finally made an excellent recovery. Several such examples will be found recorded in the *London Medical Times and Gazette* for September, 1874, by Dr. Benjamin W. Richardson, in an article on "Blood-letting as a Point of Scientific Practice," and are worthy of special study.

This spring twelve months ago I was requested to visit a lady, a stout, muscular person, in robust health, upwards of forty years of age, who for several years past had suffered much from attacks of headache, attended with dizziness, and occasionally, also, with vertigo. She had tried various remedies without benefit. I suggested bleeding, to which she at once assented, and I drew fully three half-pints of blood, with immediate and permanent relief.

Surgeons the world over draw blood after severe reaction in concussion of the brain, to prevent inflammation of that organ and of its membranes. The more plethoric the patient the greater the necessity for such interference; but the operation should by no means be restricted to this condition, as it is often of great value, if timeously performed, in the comparatively anæmic subjects. It was a case of concussion of the brain that gave rise to the never-to-be-forgotten conversation between John Hunter and his pupil, Dr. Physick, at the time resident physician at St. George's Hospital, London. A man laboring under concussion of the brain from a fall from a scaffold was brought into the surgical ward in a state of utter unconsciousness. "What shall I do?" said the pupil to his master. "Shall I bleed him?" "Bleed him? Bleed him, sir? No, sir! You would kill him outright. Wait, sir, until he reacts, and then bleed him,—bleed him to death, sir." [Dr. Charles D. Meigs, in Pennsylvania Hospital Reports, vol. i. p. 27, 1868.]. In compression of the brain from fracture, with depression of bone and compression from extravasation of blood, the abstraction of blood by the lancet and leeches is frequently resorted to for the purpose of securing cerebral accommodation, and the practice, as is well known, is often followed by the most gratifying results.

We all have, at some period or other of our lives, experienced the torturing, racking pains in the back and limbs, so common in bilious, remittent, and intermittent fevers, as if the body was about to be broken in two, causing us to turn and toss about almost incessantly in search of ease; the head generally at the same time terribly distressed, the skin hot and dry, the thirst intense, and the heart in wild, tumultuous motion. Who that has ever been freely bled in such a condition of the system does not remember with grateful feelings the prompt alleviation afforded by the operation? The application of a dozen wet cups to the aching back has often speedily transported the poor patient, as it were, from torment into elysium. In gout and rheumatism the abstraction of blood is frequently of immense benefit, if not as a direct curative agent, as a means of relieving pain and paving the way for the more successful action of other remedies. The passage of renal and biliary calculi is often greatly expedited, and the suffering caused by it much alleviated by a copious bleeding, especially in stout, plethoric subjects.

But I must stop, for my remarks have already been extended far beyond my original design, which was simply to point out a few of the more prominent diseases in which, in my humble opinion, this much-neglected but most valuable therapeutic agent may be advantageously employed.

The fate of blood-letting, Mr. Chairman, teaches us an important lesson, not at all calculated to elevate our pride as men intrusted with the preservation of the health and lives of our fellow-beings. It shows what little faith there is to be placed in human judgment, and how sadly we are influenced by authority and fashion in a matter pertaining to the dearest interests of society.

If I wished to be satirical, I should say that there are in our profession, as there are, indeed, in every other, two distinct classes of men,—the thinking and the non-thinking. The former, whose number is exceedingly limited, accept every novelty, or great and sudden change, with suspicion, wisely concluding that the one ought not to be adopted until it has been fairly tested by well-conducted observation and experiment, and that the other should not be rejected without sufficient cause. The non-thinking man, on the contrary, eagerly lays hold of every novelty, and seldom stops to seek a reason for his new faith. He adopts it simply because his neighbor adopts it. Especially is this the case when the novelty, whatever it may be, has a distinguished parentage, as when it has received the sanction of a great name, or, perchance, if it had a transatlantic origin. Jones, Robinson, or Brown, in Europe, is always a great man, far greater than his namesake on this side of the water. This non-thinking man confounds progress with improvement. He does not weigh the pros and cons of a question; he takes a shorter route; sees things in a distorted light; assumes for granted what he cannot comprehend, and jumps at conclusions. As the sheep follows the wether, so he follows his master, looks through his spectacles, believes in his infallibility, and swears by his authority. The more the assertion borders on the marvellous, the more greedily does he gulp it, so much easier is it to assume the truth of a proposition or statement than to prove it by sound logical argument and inductive reasoning. I think I am not guilty of exaggeration in what I say. It really seems to me as if we were bereft of our senses. No sooner is a new remedy, an operation, or a method of treatment introduced to notice, than it is puffed into gigantic proportions and endowed with virtues as foreign to it as any other folly under heaven. Certain it is, there never was any greater need for deliberation and reflection than there is at the present time; greater need of asking ourselves, "Watchman, what of the night?"

ORIGINAL COMMUNICATIONS.

CARIES OF MASTOID CELLS—REMOVAL OF SEQUESTRUM—FACIAL PARALYSIS AND RECOVERY.

BY CHARLES HENRY BURNETT, M D.,

Aural Surgeon to the Presbyterian Hospital in Philadelphia.

THIS case came under my care last August (1874), through the kindness of my friend Dr. A. Douglass Hall.

The patient, a lad of 14 years, stated that he had had a neglected aural disease ever since childhood. Some weeks previously he had been attacked by severe pain in the left ear, after bathing in the sea, at Cape May, where he was employed. He then came to Philadelphia to obtain relief from the terrific pain in the ear, and applied to Dr. Hall, who made a deep incision over the mastoid process, giving vent to a large amount of exceedingly offensive pus, and relieving the suffering of the patient greatly. The next day Dr. Hall sent the boy to me. I found the lad very weak, with a pulse over 100, forehead bathed with clammy perspiration, anorexia, less pain since the mastoid incision, with considerable vertigo, and offensive purulent discharge from the ear and the incision over the mastoid process. I found that a probe entered the mastoid process point-blank, three-fourths of an inch, coming in contact with dead bone. There was also a sinus running from the external auditory meatus, upwards and backwards, to dead bone in the mastoid cavity. The patient stated that about a year previous to this time a piece of dead bone had worked its way from the auditory meatus, after an attack of pain in the ear. A probe passed through the sinus in the auditory canal, and another passed through the sinus behind the auricle, could be made to touch each other in the mastoid cavity, and dead bone was felt everywhere in their path. The silver probe passing into the sinus running from the auditory meatus became instantly blackened, and from this sinus crumbs of black and offensive bone were constantly discharged for several days. At the point in the auditory meatus where the probe entered there was a large bunch of granulations, which was finally removed by a wire-snare. I could not detect any sequestrum at that time. I placed the boy in the Presbyterian Hospital, and gave him milk-punch and tincture of chloride of iron thrice daily for several weeks, during which period the pain became very much less in the ear; that which he still experienced was above, and running forward from the auricle. The vertigo disappeared, and the patient was able to take muscular exercise; the ear became less tender, and permitted all necessary manipulation, but the patient could not lie on the ear on a bed. Under this treatment the discharge grew less, and on the 24th of September I extracted, through the opening in the mastoid process, a spongy sequestrum one-half inch square, and then, placing the broad, blunt nozzle of a syringe in the opening, I gently injected a stream of warm water, which washed out a copious amount of large cheesy-looking masses through the external auditory meatus, and some portions of the mass, passing through the Eustachian tube, escaped by the mouth. The masses were composed of large acicular crystals of cholesterine and fatty epithelial débris, and strongly reminded one of the matter found in cholesteatoma of the ear, as described by Lucae, of Berlin (*Archiv für Ohrenheilk.*, Bd. i. No. 1). The removal of the sequestrum and the subsequent syringing, with its fruitful results, gave still further relief to the patient; all pain disappeared, and he could now lie with his ear downward in bed.

The sinus behind the auricle closed in four days after the removal of the sequestrum, and in a week from that time the discharge from the ear had almost ceased, and the odor of diseased bone, which had pervaded the patient, had disappeared; but I could still feel *loose* crumbs of dead bone lying in the sinus leading from the auditory meatus to the mastoid cells. Therefore, I widened the sinus with my knife, cutting from the meatus towards the mastoid process, and inserted a tent in the widened sinus. The tent was reinserted; for five days crumbling bone came away, the odor and discharge lessened, and the sinus in the meatus closed October 17, under instillations of a solution of sulphate of copper (3 gr. to f℥j). The patient had become by this time quite strong under the constant use of tincture of chloride of iron, and, occasionally, alcoholic stimulants.

During the night of the 19th of October, four weeks after the removal of the mastoid sequestrum, the patient experienced some pain in the ear, but not enough to keep him awake. On the morning of the 20th, he found that "he could not whistle, and that the tears ran over his left cheek constantly." Facial paralysis became fully established on the left side by the 21st; so much so that food lodged between the cheek and teeth on the affected side. There was no continuance of pain, and the patient expressed himself as feeling very well. He took, without my consent, a situation offered to him, and went to work at this time, the paralysis disappearing in two weeks, as I learned subsequently, for I did not hear from him until a few weeks ago, when he visited me and I found him entirely free from paralysis and all aural discharge. He had continued, on his own responsibility, to take the tincture of the chloride of iron until the paralysis had disappeared.

Facial paralysis is not of frequent occurrence in necrosis of the mastoid process, and if it occur it is likely to be permanent. Its permanence is due to the erosion of the Fallopian canal, and an organic lesion of the facial nerve. Its occurrence and subsequent disappearance in this case is of interest and worthy of consideration. It can be explained, I think, as follows:

1. It is well known that the facial nerve will resist the chronic inflammation attacking the petrous bone, long after the Fallopian canal is destroyed. Gruber has reported a case, with an engraving, in which the facial nerve was exposed for two-thirds of its length in the tympanum, by necrosis of the Fallopian canal (Lehrbuch, p. 541), and yet no paralysis ever occurred.

2. It is therefore probable that, the facial nerve becoming unduly exposed, in the case I have described, by caries of the Fallopian tube, a slight acute inflammation in the middle ear furnished pressure sufficient to produce the functional paralysis. The disappearance of the paralysis was of course due to the absorption of the products of the acute inflammation, from which we may learn that, alarming as paralysis of the facial nerve is in *necrosis of the mastoid cells*, we are not obliged, when it occurs, to give an unfavorable prognosis, for we may have, as in this case, simply a temporary paralysis, due to pressure from an effusion of fluids, which can soon become absorbed and permit the nerve to resume its function.

TRANSLATIONS.

PRÆPUTIAL CALCULI.—Dr. F. W. Zahn communicates the following case to *Virchow's Archiv*, February 15, 1875:

The patient, a peasant 52 years of age, was found on examination to be suffering from cystitis, and, in addition, congenital phimosis. The præputial sac was stuffed with stony concretions of various sizes, which rendered urination a matter of some difficulty.

The patient had formerly made use of a catheter, and more recently of a knitting-needle, to press the stones back and thus allow of urination. Quite lately one or more of the concretions had become dislodged, thus allowing a somewhat freer stream. As the cystitis seemed dependent upon the difficulty of urination, the operation for phimosis was suggested, which the patient refused. He was then put upon quinine, which relieved many of his symptoms, chill, etc., connected with the bladder-trouble.

Six months later, the patient came again under observation. The cystitis had continued, and he was weaker. Two more stones had been passed. An incision was now made, and the concretions removed. The largest of these, rough and convex on its surface and resting on the glans, caused a flattening of the glans, or rather an hour-glass contraction. The urethra was much narrowed to a point about three centimetres from its opening. This narrowing having been enlarged by a tent, the rest of the urethra was found of normal size.

Soon after this operation the patient began to show signs of renal disease, and finally died with symptoms of uræmic poisoning. Unfortunately, no post-mortem examination was allowed. The calculi, fourteen in number, weighed in all 28.5 grammes. The largest was egg-shaped, 29 millimetres long, 26 millimetres broad, and 22 millimetres thick, and had a volume of 9 cubic centimetres. This was the one referred to above as pressing upon the glans. The other concretions varied in size down to that of a peach-kernel, and were of various shapes and appearances. Section showed a central roundish nucleus, sometimes distinguished from the outer layers by being of a reddish color, in other cases by its softer consistency, but always homogeneous. Outside of this the accretion was arranged in concentric layers. The nuclei contained much horny epithelium, which was only sparingly found in the outer layers. After a somewhat minute discussion of the origin of these concretions in general, Dr. Zahn states it as his belief that they are formed around the "epithelial pearls" which are found in the smegma præputii of newly-born children. X.

CIRRHOSIS OF THE LIVER IN YOUNG CHILDREN.—Dr. Cazalis reports (*Le Progrès Médical*, No. 12, 1875) two cases of cirrhosis of the liver occurring in children seven and nine years of age, respectively. The first child had suffered much from cold, hunger, and privation during the siege of Paris. She presented, on admission to the hospital, moderate œdema of the lower members, abdomen distended with ascites, the superficial veins distended, not painful on pressure; face not swollen, but emaciated. Sonorous râles could be heard in the lungs. The urine contained albumen. About a week later an acute attack supervened, accompanied by very severe abdominal pains, like those of peritonitis, and intense dyspnœa, pulse 130.

During the next few days the dyspnœa diminished, but the ascites increased. Puncture of the abdominal cavity was followed by relief. No more fluid formed there; but the lungs became œdematous, and diarrhœa, erysipelas, and gangrene of the vulva supervened, followed by death. Post-mortem examination showed pleuritic effusion, moderate œdema of the lung with atelectasis of the lower border. The liver was very small, presented plaques of perihepatitis, was mammillated on the surface. The hepatic tissue was hard and resistant. The capsule of Glisson was enormously developed; the parenchymatous substance was circumscribed by fibrous tissue, hard, and of a uniform dark-brown color. The branches of the portal vein were surrounded by an abundant mass of fibrous tissue. The peritoneum was covered with false membrane.

The second case was, in the main, similar to the first. The child had lived in a damp ground-floor apartment, and in a miserable way. The symptoms were very similar to those of the first case, and the autopsy

showed, as in that instance, extreme atrophy of the liver, indications of perihepatitis, mammillations of the surface, and, upon section, fibrous gray tissue, enclosing numerous patent vessels, islets of yellow, soft, glandular tissue, and, in some places, intense congestion. In neither of these cases was there any suspicion of syphilis or malarial poisoning. Dr. Cazalis regards these cases as worthy of record on account of the extreme rarity of the occurrence of cirrhosis at such an early age. X.

QUININE IN SEPTICÆMIA AND TYPHOID FEVER.—Prof. Binz, of Bonn, has made a further contribution to our knowledge of the therapeutic effects of quinine. In a communication published in the *Berliner Klin. Wochenschrift*, No. 8, 1875, he alludes to experiments made by himself and others as to the effect of this drug in preventing a fatal result after injections of putrid material. He has found that in many cases (of dogs) experimented upon, a fatal result may be prevented by the administration of quinine, and even in those cases where death ensues its advent is much delayed. The temperature is lowered in all cases. As to men, Binz quotes Socin, who, at his suggestion, treated great numbers of patients during the Franco-Prussian war by quinine, in doses of from ninety to one hundred grains daily, with great success. Socin likewise suggests the simultaneous administration of alcohol, and says that he has obtained surprising results. Binz also alludes favorably to the use of quinine in typhoid fever, and quotes Liebermeister as saying that if he had to choose between the use of cold applications and quinine in a given case, he would choose the latter. As to the objection that quinine affects the intestines and causes bloody stools, Binz says that this result is due to the use of the sulphate, and recommends using the muriate instead. X.

ANÆSTHESIA PRODUCED BY ESMARCH'S BANDAGE.—Chauvel (*Centralblatt für Chirurgie*, No. 16, 1875) has made fifteen experiments: twelve on the liver, three on the upper extremities; putting on the bandage after having first ascertained the normal sensibility in each case. Diminution of sensibility was observed in each individual, not appearing immediately, but in five to twenty minutes. Insensibility appeared more quickly in the upper than in the lower extremities, its intensity depending on the tightness of the application: it first appeared in the peripheral portion of the trunk, and gradually spread to the upper regions. Insensibility to painful impressions was first noticed, but whether this extended beneath the surface was not ascertained.

In two operations for ingrowing toe-nail with the use of elastic compression very little complaint was made by the patient. In a case of ischiatic trouble the actual cautery was used after compression; anæsthesia, however, was incomplete. It is evident that elastic compression would fail in bringing about complete anæsthesia unless the ligature was placed so near the central portion of the limb as to cause other and inconvenient results. The conclusion is that, as an anæsthetic, compression cannot exclude chloroform or ether.

X.

ANTAGONISM OF JABORANDI AND ATROPIA.—M. Vulpian has laid before the Académie de Médecine the result of his researches upon animals, showing the antagonism between these two drugs, and their inverse effect upon the biliary and pancreatic secretions.

Jaborandi excites these secretions actively, but an injection of sulphate of atropia causes their arrest, and the pancreatic fluid and bile are no longer observed to pass from the canulæ previously placed in the ductus choledochus and pancreaticus.—*Le Progrès Médical*, No. 12, 1875. X.

FOREIGN BODIES IN THE AIR-PASSAGES AND ŒSOPHAGUS.—Annandale (quoted by *Centralblatt für Chirurgie*, No. 16, 1875) remarks on the advantage obtained in searching for a foreign body in the larynx through a tracheotomy-wound, if support be given from the mouth by manipulation with the fingers. For the removal of foreign bodies from the bronchus he recommends, after tracheotomy and a deep inspiration, that the trachea be closed temporarily; the deep expiration following often drives the body out. Two cases are given by Annandale (see *Med. Times and Gazette*, February 27) illustrating the successful use of each of these methods.

Krishaber (*Séance de la Société de Chirurgie*, Nov. 11, 1874), in a case of foreign body in the œsophagus, caused the patient to drink a quantity of water, and then introduced a dry sponge at the end of a whalebone bougie. When the sponge had become swollen through absorption of water it was withdrawn slowly, and swept the œsophagus thoroughly from below upwards, carrying the foreign body, a piece of turkey-bone, with it. Dr. Duplay remarked, apropos of this treatment, that it would be difficult to employ when the patient could not swallow water, and that if the sponge became greatly swollen it might be difficult and painful to withdraw it.

X.

PECULIAR APPEARANCES OF URINARY COLORING-MATTER FROM BLOOD COLORING-MATTER.—F. Hoppe-Seyler (*Centralblatt für Med. Wissen.*, March 27, 1875) observed some time ago that in treating an alcoholic solution of hæmatin with tin and hydrochloric acid—as by reduction—a coloring-matter of a peculiar appearance is noticed. This appears of a brownish-red color by transmitted light, and of a deep yellowish-green metallic lustre by reflected light. The author has now found that this coloring-matter is identical with Maly's hydrobilirubin or Jaffe's urobilin. Hæmoglobin itself gives, by similar treatment, a similar coloring-matter. It would appear from this that urobilin is an altered product of decomposition by reduction of the coloring-matter of the blood, and that bilirubin and biliverdin are intermediate products of this metamorphosis.

By this important discovery, the long-asserted origin of this coloring-matter from blood coloring-matter is proved. The amount of urobilin excreted within a given time would serve as a measure of the loss of red blood-corpuscles. X.

RELATIONSHIP OF PUERPERAL AND SURGICAL PYÆMIA.—E. Kleinschmidt, with the object of making a comparison between these diseases, brought together one hundred and eighteen cases of puerperal and eighty-three of surgical pyæmia. The result of the comparison showed certain essential differences. The puerperal affection was found to occur principally in the more youthful, while the surgical disease was more apt to occur in older persons. In the former the initial chill was usually (27 cases out of 40) found to occur in the first week, while in a similar number of cases of surgical pyæmia the first chill occurred in the first, second, and third weeks, which circumstances Dr. K., with C. Müller, explains by the possibility of infection before birth.

The greater frequency of renal abscess in puerperal cases (14.3 per cent. to 15 per cent. against 4 per cent. in surgical pyæmia) is not satisfactorily explained by the peculiarity of the injuries in child-birth.—*Centralblatt für Chirurgie*, No. 16, 1875. X.

DR. E. H. TRENHOLME reports (*Canada Medical Record*, p. 507, 1875) a case of traumatic tetanus successfully treated with chloral and bromide of potassium.

PHILADELPHIA
MEDICAL TIMES.
A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

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EDITORIAL.

UNIVERSITY OF MICHIGAN.

MOST of our readers will, no doubt, remember our former editorial upon the University of Michigan. We have received from some of those connected with the institution courteous letters for our private enlightenment, and have perused the public reply of the *Peninsular Journal of Medicine* with care. Either the editor of the latter journal has not read the editorials which have appeared in the *Philadelphia Medical Times* during the last year, or else he is guilty of wilfully disregarding his own motto, "*Ars, ante omnia veritas.*" Any one who habitually glances over our columns must know that ever since the *Times* has been under the present editorial management it has been squarely and outspokenly opposed to the present system of medical teaching upon this continent, and has in no degree exempted the Philadelphia schools from its anathemas. Under these circumstances, to assert, by direct implication, that the editorial of the *Times* was written for the purpose of getting students for "a large Philadelphia medical school," with which the chief editor of the *Times* is so unfortunate as to be connected, is not only not courteous, but betrays a great want of wisdom.

As already stated, we have carefully read the editorial of the *Peninsular Journal of Medicine*, but we see nothing in it to require a revision of that which we have previously written. No new facts are developed. We perfectly agree with our Western *confrère*, that the present system "is the fault of our whole system of education and laws on the subject of medicine, and of public opinion and practice." Certainly the University of Michigan did not originate this condition. The great mistake of its governors has been, as we conceived, the neglect of the opportunity peculiarly offered them of reforming the present system, or, in other words, their direct and unnecessary choice of large classes and present popular *éclat*, instead of the higher glory of being the mother of that newer education which must come so surely as the American people are progressing towards a higher civilization and a better government.

One of our correspondents has certainly given us a new idea which has some force in it, namely, that the University is not independent of its classes, because, as we understand it, it is supported by taxes, and the people who pay them would not be satisfied unless the classes were large. This seems plausible; but why does it not hold true in regard to the pharmaceutical, engineering, and other departments of the University? Are the people of Michigan such fools that they could not be made to understand that whilst a half-educated doctor is a pest to society, a thoroughly-educated, intelligent physician is a choicest blessing?

The editor of the *Peninsular Journal* refers to one more fact in confirmation of what he has said "of the thoroughness of the ordeal for the diploma of the University," *i.e.*, in the Jefferson Medical College of Philadelphia, the diploma was granted, in 1875, to more than twice as many in proportion to the number in attendance as at the University of Michigan. There is a possible and very plausible explanation of this fact essentially different from that drawn with such effort by our Western *confrère*,—not that the Western diploma is of more difficult attainment, but that, the diploma of the Jefferson being considered more valuable than that of the University of Michigan, very many students prefer attending only one course in the latter institution, and come East to get their degree. The real reason, probably, is that the first course is taken at the University of Michigan to save expense, but that even the American medical student, during the last course, feels the necessity of that wide clinical teaching which can be obtained only in a great city.

THE London *Lancet* is in a state of great wonderment because a dentist of Scarborough has recovered his fees by suit, although he had an American

diploma. *En passant*, the London *Lancet* above all other journals ought to do its utmost to preserve the well of pure English from the defilement of slang, yet we notice in its report of the Exhibition of the Royal Academy, "There is no portrait or bust of any great gun in medicine." Is the art exhibition a place for artillery-trial, that one should expect to see there a gun "bust"?

A QUICK-WITTED Virginian details in the *Cincinnati Medical News* of May, 1875, the way in which he aspirated (successfully and repeatedly) the bladder of an old man suffering from enlarged prostate, by means of a Davidson's syringe and a hypodermic needle. A piece of india-rubber tubing was fastened to the needle, and another longer one to the nozzle of the syringe, and an attachment between the two made of a quill.

THE abortionists are beginning to reap a little of their deserts. The Dr. Dubois or Perpente, of whom we spoke some time since, has been found guilty of being "accessory after the fact," and a professional named Heap has very recently been executed at Liverpool.

WHO will free this country from the plague of medical schools? We have just received the announcement of the Penn Medical University of this city, with its lists of "alumni" and "alumnæ." Truly the Americans are a long-suffering and much-suffering people.

CORRESPONDENCE.

LONDON LETTER.

[From our own correspondent.]

Medical Affairs in London—Mr. Erichsen on his American Visit—Why Sir Henry Thompson did not come—Sir William Fergusson and Sir James Paget at Norwich—The Debate on Vivisection—American Physiologists.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

IF, after a long silence, I may again take up my pen to renew correspondence, I will utilize part of my Easter holiday to tell you of some of the doings of London doctors during the last winter session.

I hardly know where to begin amidst the crowd of small matters that suggest themselves for discussion. To begin with, the earlier part of the session we had Mr. Erichsen's address on the experiences of his American tour. To say the truth, these were disappointing. Mr. Erichsen has a good reputation here for sound judgment, and, although the surgeon has never been on a level with his book in reputation, we expected that with so many advantages of observation, and so well-trained a critical capacity, Mr. Erichsen would have brought us home something new. He has, however, done nothing of the sort; whether he troubled himself little about surgery, but more about the delights of hospitality and the pleasures of society and scenery, I cannot say, but the story which he was well qualified to tell, and which we hoped to have heard from him, has not been told. He has, however, paid a handsome tribute to the skill, capacity, and moral worth of the professional classes with whom he was brought into contact.

In missing the visit of Sir Henry Thompson you lost a guest who would probably have been more communicative on his return, and who has a considerable power of expression. The preliminary sufferings of sea-sickness on the way from Liverpool to Kingstown appear to have kept him away, and he compensated himself by a long tour in Italy, from which he did not return till November. Our English surgeons are thus beginning to emulate yours in their long vacations of months. Since he has come back he has resigned his office at University College Hospital, confining himself entirely to private practice. I believe that Mr. Erichsen also desired to resign, but was persuaded to hold on a little longer, as the Hospital could not have lost its two principal surgeons without incurring a serious loss of prestige.

If you desire a *vates sacer* who can with adequate eloquence describe what he sees, you must secure Sir James Paget; he is the orator of the profession; and his felicitous words gain added weight by the nice accuracy of thought which they convey. At present very few medical men here are at all acquainted with the extent of American medical institutions or the high standard of scholarship in the foremost ranks of your professional men. American degrees of a spurious and worthless kind are still freely sold here to quacks, and occasionally prosecutions, in which they are brought forward as an answer to charges of unqualified practice, sustain the prejudice.

Sir James Paget has been the object of attack here in consequence of his having sanctioned by his presence and approval the performance of certain experiments at Norwich, on a dog, by M. Magnan of Paris, with a view of demonstrating to the members of the British Medical Association the difference of action of alcohol and absinthe. Two "wild Irishmen," Professor Haughton and Mr. Tufnell, interfered,—Mr. Tufnell behaving with unqualified violence, and endeavoring to release the animal and stop the experiment. Mr. Tufnell had introduced a lay friend, and a policeman, I believe, was summoned. Ultimately Sir James Paget was appealed to; he sanctioned the completion of the experiment, on the ground that it "tended to the advancement of knowledge useful for the relief of disease." This scene led to a prosecution by the Society for the Prevention of Cruelty to Animals, and ultimately, although an acquittal was obtained, the decision was not one unequivocally favorable to the defendants. Mr. Tufnell holds for this year the position of President of the Royal College of Surgeons of Ireland; and, although he showed himself intensely ignorant of the subject in which he took so active a part, his official position produced a strong impression of his authority to speak for the profession. Unfortu-

nately, also, he found an unexpected ally in Sir William Fergusson. Although ignorant of the experiments, and of the relative facts of the action of alcohol and the essential oils, Sir William Fergusson allowed himself to be seduced into a general condemnation of physiological experimentation by the injection of fluids into the blood, and he declared that he considered it a barbarous and cruel proceeding.

The profession at large has viewed the course taken by Mr. Tufnell and Sir William Fergusson with great indignation and regret; not so much at the peculiarity of their opinions and the wild way in which they have expressed them, as at the reckless ignorance and intemperance with which they have publicly denounced methods of which they evidently do not understand the value, and experiments which they had not taken the trouble to study. The sequel of this "national prosecution" has been the commencement of a public agitation to impose legislative restrictions upon the practice of experimentation upon animals. A petition has been circulated, under the especial auspices, it is stated, of Mr. Hutton, the editor of the *Spectator*, Miss Frances Power Cobbe, Miss Burdett Coutts, and others, openly charging physiologists with the practice of daily barbarities of a wanton character. It is especially charged that American physiologists are guilty of cruelties which are revolting to humanity; that they are in the habit of daily demonstrating by vivisection of living animals, and of encouraging their students to similar cruelties. These charges were expressly refuted in the *Times* newspaper by Mr. Ernest Hart, who declared from his own knowledge, and from documents which he quoted, that the statements which have been published in every newspaper of London and throughout England by these memorialists as to the barbarity of American medical teachers and physiologists were "a foul calumny." In last week's number of the *Spectator*, however, Mr. Hutton again intimates that he adheres to the original view. I think it would be worth while for some of your American physiologists to look up the papers, and to send a formal repudiation of Mr. Hutton's charges to the *Spectator*, or, better still, to the *Times;* for the matter is not yet ended. A bill has, it is stated, been framed, and is now about to be introduced, with a view of penalizing physiological experiment; and, no doubt, during the discussion these stories of the daily horrors perpetrated by American teachers and their students will be again revived as examples of the moral degeneracy which is the consequence of practising vivisection! Dr. Bartholow's experiment on the exposed brain of a patient at Cincinnati has been this week trotted out at length in the *Spectator*, as an example of what is likely to happen to human patients in the future if this moral degeneracy be not checked. There is no greater intolerance than that of the humanitarian enthusiast towards people who know him to be wrong; and it has never been more strongly exhibited than in this case. A curious feature in this movement is that it is largely supported by sportsmen, on the ground of their great love of—dogs. The bloodthirsty humanitarian this week expresses the delight which it would give him to "wing" any investigator who should for any purpose inflict suffering on a dog.

As this controversy has extended over many months and is still in a critical condition, and as it has largely included a discussion of American character as well as of medical proceedings, you must excuse me for allowing it to occupy so large a space in this letter.

I shall next week have much to tell you of our arranged scientific work for the next few months; of the progress of medical schools for women; of prosecutions of midwives for spreading puerperal fever, and of a surgeon for cutting away fifteen feet of intestine from a lying-in woman; *et alia multa.*

PROCEEDINGS OF SOCIETIES.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

WEDNESDAY, January 6, 1875.

DR. JOHN ASHHURST, JR., read a paper on *Excision of the Elbow*, narrating eight cases in which he had *excised the elbow-joint*, and appending a few practical remarks upon the rules which should guide the surgeon in determining to resort to this mode of treatment, upon the steps of the operation itself, and upon the after-management of patients.

He stated that excision of the elbow-joint when practised in persons past the middle period of life is attended with no inconsiderable risk. Thus, of fifteen cases of excision of the elbow-joint for disease in persons of forty-five years and over, collected by Dr. Hodges, of Boston, six proved fatal (two after amputation), while recovery was obtained in only nine. This rate of mortality (40 per cent.) is no doubt larger than that which attends amputation performed under similar circumstances, but the result of a successful elbow-joint excision is so satisfactory, enabling the patient to return to his ordinary occupation,—a most important matter for a laboring-man,—that the surgeon is fully warranted in recommending the graver operation in suitable cases. His cases were as follows.

Case I. Arthritis of left elbow in an elderly man; excision; death from exhaustion on thirty-third day.—This case having been already reported in the *American Journal of the Medical Sciences* for January, 1868, p. 42, we do not here reproduce it.

Case II. Excision of the right elbow-joint for disease in a young adult; death from tuberculous meningitis.—As a notice appeared in vol. iii. of the Proceedings of the Philadelphia Pathological Society (p. 157), we do not reproduce it.

With regard to the structural changes met with in this and similar cases, Dr. Ashhurst agrees with Barwell in regarding the so-called "pulpy" or "gelatiniform degeneration" as essentially the same as the granular change met with in cases of ordinary synovitis, the difference being that in the latter affection this granulation tissue undergoes further development, whereas in the cases now under consideration it remains in a rudimentary state. In fact, it occasionally happens that in one part of a joint the synovial tissue is found to be entirely replaced by organized intra-articular adhesions, while in another part of the same joint it may present the characteristic appearances of the gelatiniform change.

Case III. Excision of the right elbow; recovery.—Josephine K., aged 7 years, was admitted to the Children's Hospital on October 16, 1870, suffering from arthritis of the right elbow, the result of an injury received some six months previously. The joint was painful and tender, hot, and swollen, particularly at its radial side. After a fair trial of the effect of rest, with the administration of tonics and the topical use of soothing applications, excision was resolved upon, and on December 19, 1870, the patient having been etherized, the operation was performed, the joint being laid open by a single longitudinal incision, and the articulating extremities of the several bones removed with the "Butcher's saw." The joint was found to be full of pus, which gushed out as soon as the knife entered the articulation, the cartilages were eroded (especially over the head of the radius), and there was incipient caries of the subjacent bones. No ligatures were required, and, the edges of the wound having been brought together with leaden sutures, a strip of oiled lint was applied, and the limb placed at an angle of about 120° in a felt splint, which, however, bred maggots in the dressings, and was therefore replaced by a simple wooden splint on the third day. The after-progress of the patient was satisfactory; an abscess which formed in the neighborhood of the excision-wound was opened on January 31, 1871; and in the following March the splint was left off, and a simple soap-plaster and bandage substituted. The motions of pronation and supination were by this time fully restored, and there was slight power of flexion and extension, which could doubtless have been materially increased had the patient persevered in systematically exercising the limb. This, however, was not done, and anchylosis as regards flexion and extension eventually occurred. The patient was discharged from the hospital on April 15, 1872, but the last occasion upon which I saw her was in February, 1874, at which time the condition of the resected arm was very satisfactory, the limb, though stiff, being extremely useful, and the motions of pronation and supination being, as before remarked, perfectly restored.

Case IV. Compound fracture and dislocation of right elbow-joint in an adult; excision; death on seventh day from delirium tremens.—The subject of this case was a teamster, J. C., an Englishman by birth, and 51 years of age, who on March 27, 1871, was thrown from his wagon against a curbstone, sustaining such severe injuries as to necessitate his being brought to the Episcopal Hospital, where he was admitted shortly after the occurrence of the accident. Upon examination it was found that the patient had received a compound forward dislocation of the right elbow, with fracture of the olecranon; he strenuously objected to amputation, and, as the injury was limited to the parts entering into the articulation, it was determined to make an effort to save the limb by excision, though the intemperate habits of the patient (he confessed to half a gallon of beer daily) rendered the prognosis of the case less favorable than it would have been under other circumstances.

Ether having been administered, the joint was excised in the usual way,—viz., by making a single longitudinal incision between the olecranon and internal condyle, and, having turned out the ends of the bones, sawing them off with Butcher's saw. Two ligatures were required, a tent of oiled lint was introduced and the extremities of the wound closed with sutures, and the whole was then wrapped with a cloth dipped in laudanum, and the limb placed at rest on an obtuse-angled Physick's splint. The patient did well for four days, when he was attacked with delirium tremens, which carried him off on April 3, just one week from the date of the operation.

Case V. Excision of left elbow-joint for arthritis; recovery.—The patient in this case was a boy, R. A., aged 10 years, a native of Scotland, who was admitted to the Episcopal Hospital on January 11, 1872, suffering from arthritis of the left elbow, the result of an injury received one year previous. Excision was performed in the usual way (the joint being opened by a single incision made in the direction of the long axis of the limb) on January 18. Five ligatures were required, the excision wound was dressed with oiled lint, and the arm placed on an internal angular splint. The exsected parts presented a good example of ulceration of the articular cartilages with incipient disease of the underlying bone. The splint was left off in the course of a few weeks, and care taken to prevent the occurrence of anchylosis by the systematic use of passive motion. The result of the case was in every respect satisfactory, the patient leaving the hospital on June 1, 1872, with the wound firmly healed, and with the normal motions of the part quite restored.

Case VI.—Excision of the left elbow-joint in a young child; splint left off after the eighth day; recovery.—The subject of this case, G. P., a boy 4 years of age, entered the Children's Hospital on August 8, 1872, suffering from disease of the left elbow-joint of one year's duration, believed to have originated from an injury, though the history of this was not very clear. Excision was performed in the usual manner on August 12, two ligatures only being required, and the wound being closed with sutures, dressed with oiled lint, and placed on a splint; this, however, was dispensed with after the eighth day, by which time the wound had united, and the parts were measurably consolidated, the limb from this time forward being simply supported in a broad sling. The principal seats of disease were the base of the trochlea and the greater sigmoid cavity of the ulna, at which points the cartilage had disappeared, and the subjacent bone was carious and deeply eroded. The progress of the case after the operation was satisfactory; an abscess which had formed in the neighborhood of the joint was opened on February 28, 1873, and the patient left the hospital on May 28 of the same year. The wound was firmly healed, the arm strong, and the motions of the part perfect in every respect.

In the next case the patient made a good recovery so far as the operation was concerned, but perished from the effects of constitutional disease nearly seventeen months subsequently.

Case VII. Excision of the right elbow-joint for destructive disease, the result of hereditary syphilis; recovery; death from syphilitic disease of the brain.—The patient in this case was one of those unfortunate children of whom we see so many in surgical practice among the poor of large cities, who enter upon life bearing about them the seeds of death, and who, after a few years of suffering, perish miserably, the victims of their parents' misconduct. J. S., a boy 6 years of age, entered the Children's Hospital on September 4, 1872, suffering from hereditary syphilis in an aggravated form. The record at the time of his admission shows that he had then necrosis of the left radius and of the lower jaw, with severe osteitis of the right humerus, extending to the lower epiphysis of the bone and threatening the integrity of the elbow-joint. A day or two after admission, a superficial exfoliation was removed from the radius, and on September 9, the patient being etherized, a large sequestrum was taken from the jaw, the portion removed extending to the articulation of the left side, and constituting about one-third of the lower maxilla. Under careful nursing and constitutional treatment, the patient's general condition now improved, and the jaw and left arm healed; the state of the right arm, however, became steadily worse, and in January, 1873, it

became evident that the elbow-joint was hopelessly diseased. Excision was accordingly resorted to on January 13, the operation being performed in the usual way, the wound dressed with oiled lint, and the limb laid upon a splint, which, however, was dispensed with as soon as the parts had become sufficiently consolidated. The progress of the case, so far as the operation was concerned, was satisfactory, the wound healing well, and the patient regaining considerable use of the limb; but fresh evidences of constitutional syphilis were not slow to manifest themselves. Gummatous tumors, which rapidly ulcerated, formed on the arm, on the shoulder, and on the side of the chest; the *upper* jaw became necrosed, and in October about one-third of its alveolar border was removed; finally, in June, 1874, symptoms of cerebral disease were developed, the patient lying in a stupor unless aroused, when he was delirious, but without excitement; and in spite of the administration of large doses of iodide of potassium, death, preceded by coma, took place on June 7. No post-mortem examination was permitted, but there can be little doubt that intra-cranial syphilis was the cause of the fatal issue.

The next case is illustrative of a condition perhaps more often met with in the knee than in the elbow, but which may, Dr. Ashhurst affirms, when occurring in either situation, in children at least, be treated by excision with the most gratifying results.

Case VIII. Excision of the left elbow-joint for partial anchylosis with recurrent arthritis; recovery.—This case occurred in a German boy, C. K., 6 years old, who was admitted to the Episcopal Hospital on March 24, 1873. A year before, the left elbow had received an injury, the nature of which was unknown, and for which no treatment had been employed. The joint, at the time of the patient's admission, was partially anchylosed, tender and painful on motion, with considerable thickening of the soft parts, and a distortion which simulated partial displacement of the radius. The part was constantly getting hurt, and every fresh injury left the limb more crippled than before. Excision was performed in the usual way on March 27, the lower epiphysis of the humerus being found to be separated and slightly carious, and the soft tissues of the joint presenting in parts the pulpy or gelatiniform change which has already been alluded to. The after-progress of the case was perfectly satisfactory; all the sutures were removed on April 1 (no ligature had been required); on April 18 the patient was allowed to get up; by May 17 the wound was almost healed, and the functions of the part were in a great measure restored; and, finally, on November 13 the patient was discharged from the hospital, cured.

Remarks.—Dr. Ashhurst enumerated the following reasons for the operation of excision of the elbow-joint: Grave wounds of the articulation; compound fractures implicating the joint; compound dislocation; arthritis which has resisted non-operative measures, or which has advanced to the stage of destructive disorganization,—and particularly arthritis of the gelatinous variety; fibrous anchylosis when complicated by frequently-recurring attacks of inflammation of the joint; and bony anchylosis, when the limb is in such a position as to render it useless to the patient. The operation is, indeed, recommended by some writers in cases of bony anchylosis in a good position; but Dr. Ashhurst had never felt justified in resorting to it under these circumstances.

Excision of the elbow may be resorted to with much greater freedom than excision of other large joints, because the mortality after the operation is so moderate, and the result of a successful excision so much better as regards the utility of the limb than the cure obtained by the occurrence of anchylosis.

The chief contra-indications to excision of the elbow have regard to the *age* of the patient and to his *constitutional condition*, particularly in respect to the existence or non-existence of visceral disease.

The influence exercised by the *age* of the patient upon the result of the operation is shown by the following recast of Hodge's table of 119 cases of excision of the elbow for disease of the joint:

Age.	Recovered	Died.	Amputated.	Not terminated.	Total.
Under 10	3	1	2*	...	6
10 to 20	27	3	2*	...	32
20 to 30	28	3	6*	2	39
Over 30	26	7	5†	...	38
Not stated	3	1	...	...	4
Aggregate	87	15	15	2	119

This table shows that while the mortality for all ages under thirty is but about 9 per cent. (77 cases, 7 deaths), the mortality for all ages over thirty is almost 24 per cent. (38 cases,‡ 9 deaths).

The *constitutional condition* of the patient exercises a very important influence on the result of the operation. There is perhaps less immediate risk attending an excision of the elbow than an amputation of the arm, on account of the comparative freedom from hemorrhage in the case of the first-named operation; but the much longer period required for convalescence after excision exposes the patient for a longer time to the risks of erysipelas, pyæmia, etc., and gives opportunity for the development or aggravation of tuberculous and amyloid degenerations.

Hence, should there be reason to suspect serious disease of the lungs, liver, or kidneys, the operation of excision would be so far contra-indicated, and, if under these circumstances any interference should be required, preference should, as a rule, be given to amputation.

Except in his first case, in which he adopted the **H** incision of Syme and Butcher, Dr. Ashhurst has uniformly employed and much prefers (as originally suggested by Park) a single longitudinal incision on the inner and posterior side of the joint. With a little practice this mode of operating is found quite as easy as any other, while it has the great advantage of leaving a linear wound which has no tendency to gape.

The length of the incision may vary from two to five inches, according to the size of the arm. Its direction should, of course, correspond with the long axis of the limb, and it should pass on the inner side of the olecranon and a little on the radial side of the ulnar nerve. In order to guard against loss of the power of extending the limb, Prof. Spence recommends that the triceps tendon should be divided by means of an incision in the form of an inverted **Λ**, while with the same object Mr. Maunder takes care to respect those fibres of the tendon which are inserted into the fascia of the fore-arm. Either of these plans may be adopted with good result. Prof. Sayre's plan of leaving the portion of the olecranon to which the tendon is attached, Dr. Ashhurst feared, would increase the risk of anchylosis.

The points of most importance in the operation are to save the ulnar nerve from injury, and not to interfere with the tubercle of the radius, so as to preserve the attachment of the biceps muscle. In excisions for

* Recovered after amputation.
† Two recovered; two died; result of one not mentioned.
‡ This includes the two cases which terminated fatally after amputation.

disease, the nerve need give no trouble, for it is so imbedded in inflammatory tissue that it can be readily drawn from its position in the groove between the olecranon and internal condyle, and held to the inner side, and indeed need not be seen during the whole operation. In traumatic cases more difficulty is, of course, experienced; though even here a little care suffices to avoid any untoward accident. Provided that the tubercle of the radius is preserved, the more bone (within certain limits) that is removed, the better will be the result of the operation; the risk of anchylosis is much greater than that of flail-like union, and hence the saw may be used freely, without any dread of interfering with the future utility of the limb.

In the *after-treatment* of a case of elbow-joint excision, the most important point is to guard against the occurrence of anchylosis; and this may best be done by abandoning the splint at a very early period,—as soon as the external wound has united and the inflammatory swelling which always follows the operation has subsided. Some writers, indeed, go so far as to recommend that no splint at all should be employed, but that the limb should be, from the first, simply laid upon a pillow. This advice seems to Dr. Ashhurst injudicious, particularly in the case of children. By putting the limb at rest upon a well-padded splint for a week or ten days, the risk of consecutive hemorrhage is greatly diminished, the inflammatory action which follows the operation is lessened, and the part is placed in the most favorable condition for rapid repair.

The chief *statistics* of the operation are as follows:

Heyfelder and Boeckel have tabulated in all 203* cases of total and 79 cases of partial excision of the elbow. The result in one of the cases of total excision is not stated, but of the remaining 202, 8 were saved by amputation, while only 24 terminated fatally, giving a death-rate for the operation as performed for all causes of less than 12 per cent. If excisions for chronic disease only are considered, the figures are 145 cases, with 20 deaths and 7 consecutive amputations, a mortality of over 13 per cent. The 79 cases of partial excision gave 8 deaths and 3 amputations, a mortality of but little over 10 per cent. Hodge's statistics, which, though less extended, are probably more accurate, give a slightly different result; of 119 cases of excision for disease, 15 terminated fatally and 15 required subsequent amputation, death moreover following in 2 of the latter; these being included in the list of fatal cases, the death-rate is found to be over 14 per cent. It is to be observed, however, that these figures embrace both complete and partial excisions, as well as 16 cases in which it is not mentioned whether the whole joint was or was not removed. If the complete excisions alone are considered, the figures are 82 cases, with 7 deaths and 7 amputations (one fatal), the mortality thus being but a little more than 10 per cent. On the other hand, 21 partial amputations gave 5 deaths and 3 subsequent amputations, a mortality, therefore, of nearly 24 per cent. Ollier has laid great stress upon the importance of preserving the periosteum in excisions of the elbow, and has reported 35 cases of the sub-periosteal operation, with 30 recoveries and 5 deaths, a mortality of over 14 per cent.

When performed for traumatic causes, the operation in civil life would appear to be ordinarily attended with very little risk, 21 cases referred to by Dr. Hodges having given but one death, and that "from causes in no way attributable to the excision." In military practice the results are not so favorable, 286 terminated cases noted in "Circular No. 6" having given 62 deaths, a mortality of nearly 22 per cent. It is, notwithstanding, in military practice that excision of the elbow has gained some of its most brilliant successes.

Summary of the Cases detailed in the Preceding Paper.

No.	Name, Sex, Age, etc.	Nature of Affection for which Operation was required.	Result; Duration of Treatment after Operation.	Remarks.
1	B. F., male, 56, blacksmith.	Arthritis of left elbow.	Died; 33 days.	Death from exhaustion.
2	J. D., male, 25.	Gelatinous arthritis of right elbow.	Died; 19 weeks.	Death from tuberculous meningitis.
3	J. K., female, 7.	Arthritis of right elbow from injury.	Recovered; 16 months.	Anchylosis as to flexion and extension.
4	J. C., male, 51, wagoner.	Compound fracture and dislocation of right elbow.	Died; 7 days.	Death from delirium tremens.
5	R. A., male, 10.	Arthritis of left elbow from injury.	Recovered; 4½ months.	Normal motions of part restored.
6	G. P., male, 4.	Arthritis of left elbow.	Recovered; 9½ months.	Normal motions restored.
7	J. S., male, 6.	Right elbow destroyed by constitutional syphilis.	Recovered from operation; died 17 months subsequently.	Death from syphilitic disease of brain.
8	C. K., male, 6.	Partial fibrous anchylosis of left elbow, with recurrent arthritis.	Recovered; 7½ months.	Normal motions of part restored.

GLEANINGS FROM OUR EXCHANGES.

A Medico-Legal Case (*Boston Medical and Surgical Journal*, May 6, 1875).—The following appearances were observed at a post-mortem examination of the body of a woman who was struck, while lying on the track, by a train of cars, and who it was afterwards found had had some altercation with a man early in the evening of the day of the accident. They are interesting as an illustration of the value and importance of a thorough autopsy, even in cases where the cause of death seems at first sight to be very apparent.

"Over the right malar bone there was a lacerated wound one inch in length. A similar wound extended across the nose, which was crushed and forced to the left. Beneath the left eye there was another laceration, about one inch in length. These wounds were surrounded by bluish-red discolorations, which when incised showed very slight extravasations. The skin of the face in the immediate neighborhood of the wounds was slightly stained with blood. Upon the anterior and lateral portions of the neck were several irregularly-shaped yellowish-red marks, which upon being incised disclosed no extravasations. There was an irregular opening about four inches in diameter, with ragged and thinned edges, located in the skin of the chest about four inches below the middle of the right clavicle. About this opening there were several dark-reddish patches. The right arm was torn from the shoulder, and hung by a few shreds of skin. The left arm was entirely separated from the body about four inches below the shoulder. There were patches of ecchymosis in the substance of the scalp over the posterior portion of the occipital bone and also over the left temporal bone. The vessels of the scalp were congested. The vessels of the dura mater and pia mater were exceed-

* Incorrectly numbered in Boeckel's translation of Heyfelder's Treatise as 208.

ingly congested. The cerebral sinuses were full of dark semi-fluid blood. All the vessels of the brain were engorged with blood. There was no fracture of the base of the skull. The superior maxillary, malar, and nasal bones were fractured and displaced backward and to the left. The lower jaw was fractured. In the connective tissue anterior to the fourth and fifth cervical vertebræ, between the cornua of the hyoid bone, and also posterior to the larynx, were decided clots of blood. The lining membrane of the trachea was of a bright-red color and intensely congested. Anterior to the body of the cricoid cartilage, commencing at the lower border of the vocal cords, there was a marked ecchymosis. The spinal column, from the seventh cervical to the first lumbar vertebra, and the walls of the chest, were crushed. The thoracic viscera were ground to fragments. Small portions of the lung only could be identified; these portions were of an evenly-diffused dark-purple color, and excessively congested. The vessels of the mesenteries were full of dark blood. The vena cava ascendens was also distended with blood. All the other organs were examined and found to be in a healthy condition."

In the opinion of the physicians, death was caused by asphyxia, resulting from strangulation, produced at some period anterior to the passage of the railway-train over the body.

Hot Baths (*Medical Press and Circular*, April 7, 1875).—The following practical rules have been suggested by Prof. Lasegue:

No hot bath ought to exceed twenty or thirty minutes in duration.

The initial temperature ought always to be lower than the final temperature.

The increase of temperature ought always to be gradual.

The maximum temperature is usually 103°, but 108° can easily be tolerated if the patient does not remain in this temperature longer than eight or ten minutes, and if the unpleasant sensation produced by the vapor on the part of the body which is not immersed is avoided. On leaving the bath the patient goes to bed, and soon loses the sensation of unusual heat. Cold douches, which are so agreeable after hot-air baths, are not well borne after hot baths.

Lasegue has found a prolonged course of hot baths very useful in chronic rheumatic arthritis. Under their influence the movements of the articulations have become less difficult and painful. A similar mode of treatment has been found useful in chronic abdominal complaints, such as protracted diarrhœa, and even in obstinate chronic bronchitis.

An Application to Prevent Pitting of Smallpox (*British Medical Journal*).—Dr. J. Ward strongly recommends the application of honey two or three times a day by the aid of a camel's-hair pencil for more general and extensive trial, inasmuch as it seems to present many of the qualities desired,—viz., exclusion of the air, preserving the parts permanently moist, and lessening of the local irritation; while it is an application gratefully detergent and harmless, permitting the transpiratory function of the skin. The domestic application of honey to the skin of the hands and other exposed surfaces of the body, when rough or cracked from the effects of frost, etc., is more or less known, and, when tried, fully appreciated. It is not unlikely that, when applied early and repeatedly to a more extensive surface than that usually exposed to the air, and even to the roots of the hair, its primary and somewhat unpleasantly sticky feeling would speedily give place to a sense of general soothing and comfort, from its effect of allaying the irritation which is so troublesome a feature in smallpox.

A Style for Obstruction of the Lachrymal Apparatus (*The Lancet*, April 24, 1875).—Mr. R. Taylor has introduced a form of style which has many advantages over all others, and which he has used constantly and with great advantage. This style is a straight piece of silver to fit the nasal duct, having at right angles to it, at the upper end, a small arm about three-eighths of an inch in length; it is introduced along the slit-up lower canaliculus, through the lachrymal sac, into the duct. The little horizontal arm lies in the channel of the canaliculus, which it keeps open, and prevents the style from slipping out of sight, allowing ready removal when necessary. The canaliculus is slit up in the usual way, and he then either dilates for a short time with the ordinary probe and then puts in the style, or more generally, where the case is a straightforward one, introduces the latter at once. Different sizes are required. The style requires to be taken out and cleaned occasionally, and if there be any irritation set up by it, which is not common, the removal of it for a day or two is generally sufficient to allow it to be worn with ease. Patients are so comfortable while wearing it that they often neglect to appear at the end of a month or six weeks to have the instrument removed.

Treatment of Whooping-Cough (*American Practitioner*, May, 1875).—Wild claims that he can cure every case of whooping-cough within eight days by the following treatment: the patient is not to leave his room, and at every access of coughing is to place before his mouth a small piece of cloth folded several times and wet with a teaspoonful of the following solution: ether, sixty parts; chloroform, thirty parts; turpentine, one part.

Erysipelas, Septicæmia, Pyæmia (*The Lancet*, April 10, 1875).—Mr. Jonathan Hutchinson has demonstrated that erysipelas, which is so potent an agent in producing puerperal fever, is *not* a specific fever; that it is simply a local inflammation, to which all its febrile and general symptoms are superadded,—a view supported by its unilateral character, by the absence of any incubative period, and by it being possible to cut short its extension by appropriate treatment. In this respect it resembles inflammation of the uterus. The term "septicæmia" should be limited to poison introduced into the blood from the patient's own tissues, which may have been primarily inflamed by irritants derived from without, or even without any external cause whatever; while "pyæmia" has its sole origin in a suppurative phlebitis.

MISCELLANY.

A lady who is ardently opposed to vivisection, and who would like to have the letter V branded on the right hand of every vivisectionist, was about to have a dinner-party of ladies and gentlemen of her own opinion. The night preceding this great occasion she ordered of her intelligent fishmonger a crimped skate, and in the afternoon of the important day was astounded by the announcement of the cook that the fishmonger, Mr. Donald (his further name we have pledged ourselves not to divulge), had failed to send in the fish. In dudgeon our philanthropic lady, whose impulses were always ahead of her reason, whipped on her bonnet and away to the man of the marble slab and cold-blooded viands. She found him putting the finishing touch to the skate, and, having first rated her experimentalist for his delay, went on, "peppery like," as Donald noted, to find fault with his work. Donald, of

course, laid the delay on the market, and as to the fault in the crimping, he urged that if he couldn't get the animals until they had hardly a drop of life in their bodies, how could they be expected to crimp like real live ones? The lady, convinced by Donald's arguments, or fearing further delay, calmed down, and, begging the fish might be sent around immediately, was about to leave the shop, when her eye caught sight of a small moving object on the side-counter. "Why, Mr. Donald," she exclaimed, "what is this? it is moving like a watch." "That, madam," replied Donald, "is the heart of the skate; it's laid aside for a medical gentleman, wha studies the heart, to see how long it will just throb." The effect on the lady was electrical. "A vivisectionist!" she almost screamed; "and you, Donald, minister to his barbarities?" Donald stood aghast; he expected next moment to hear the request that he might send in his bill. But a new light seemed to fill his visitor's face; she spoke persuasively, yet decidedly. "Donald," she asked, "who is this wretch? We may now establish a case." Donald was on guard; he was between Scylla and Charybdis, for the doctor was as good a customer as the philanthropic lady; but he was equal to the occasion. "Madam," he replied, "I ken naething o' the gentleman, mair than he's student-like, grave and serious. When he ca's to-day for the heart, if I dinna mind his name and address, I'll e'en ask him." "Do, Mr. Donald, pray do," she answered, and, seeing a hansom cab passing the door, hailed it instanter. Donald went to open the folding doors of the vehicle for her, and heard the conversation with the cabman. "Drive me quickly to the R. S. P. C. A." "To the Arispiciary," says the driver, spelling it to himself. Then down into the cab, "Is it the new resterong at 'Ighbury, mum?"

"No, it's the animal place; take me, take me to Mr. Colam!"

Cabby,—who thought he now saw his way,—down again into the cab, "At the Zoo, mum, I suppose."

"The Zoo! No; though I believe that's a bad place enough. Jermyn Street."

And away, as fast as a wearied horse—keeping a hasty lady from friends expected at dinner—could speed under influence of jerk of rein and cut of whip, away she sped.

Meanwhile, Donald, surmising that his shop might by-and-by be under uncomfortable surveillance, picked up the still beating skate's heart, put it into a gallipot, and away himself with it to his patron the doctor. Could he see the doctor for just a second? He could, and was shown straight into the study. The man of science was busy fitting up a reoscope when Donald entered.

"I brought ye, sir, the skate's heart; it seemed to me to be stopping a wee, so I brought it mysel'."

"Thank you much," answered the doctor, taking his treasure and watching the motion. "It's a strange phenomenon."

"Mair strange than ye yerself ken, doctor," said Donald, with a knowing look.

"All God's works are, Mr. Donald," was the solemn reply of the philosopher. "Thank you again, and good-day."

And Donald, thinking he had done enough, withdrew. He had saved his patron from being possibly followed by a detective, which was what he wanted.—*British and Foreign Medico-Chirurgical Review*, April.

NOTES AND QUERIES.

PHILADELPHIA, May 3, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—In reply to the letter of Dr. J. J. Leiser, which appeared in the number of May 1, I would state that I have used hydrate of chloral in five cases of puerperal convulsions with perfect success; in two cases other means had proved ineffectual.

In the administration of chloral I follow the following simple rules.

1. To bleed if the patient is plethoric,—not with any idea of its arresting or decreasing the convulsions, but to relieve the engorged vessels, which done, renders the stomach more absorbent.

2. To give ℈j of chloral every fifteen minutes in large quantity of liquid, and, if the patient cannot swallow, give ℥ss of chloral by the rectum every half-hour, till convulsions cease.

3. Combine the chloral with some alkali (I usually use bromide of potassium), for I have found to exist a certain condition of the stomach or blood which does not allow the decomposition and absorption of chloral to take place readily unless combined with an alkali. In my last two cases this combination was made after the chloral alone refused to act promptly.

The above are the simple rules which guide me in the administration of chloral, and I have as yet not been disappointed in a single case.

I use chloral extensively in my obstetrical and uterine practice, and wish no better medicine of its class.

In regard to hydrate of chloral, we have at present on the drug-market two specimens, *one a perfectly worthless article*. The good drug is recognized at once by its pungent odor and smell of walnut; it is also in perfectly white crystals, and if examined by being held up before the eye the crystals will appear almost transparent.

The other article is of a yellowish-white, sometimes entirely white color, uncrystallized, exceedingly pungent, having the irritating odor of chlorine, and a smell somewhat like cucumbers.

Care should be taken by the physician in prescribing to call distinctly for the first article, and I am certain there will be less disappointment.

In looking over the case of the doctor, I find that he gives twenty grains of chloral at the start, then gives in *half an hour* thirty-five grains, giving in the hour about *fifty-five* grains, where I would have given *eighty grains at the lowest*. In an hour he repeats the *thirty-five* grains, which is *forty-five* grains less than I would have given. He gives in all one hundred and twenty-five grains in eight hours; I would have given, according to my method, six hundred and forty grains. This quantity *would not have been given*, for I am firmly convinced that had the doctor repeated at short stated intervals his doses, the convulsions would have ceased before *half the quantity* had been used. In my first case I used two hundred and twenty grains in eight hours, almost double the quantity used by Dr. L.; it was only after the *eight scruples* had been taken that the medicine seemed to act.

I therefore think that the want of success lies with the doctor in not giving freely the chloral, and not from the want of action in the medicine. When chloral is given in puerperal convulsions it must be given boldly.

Yours respectfully,

EUGENE P. BERNARDY, M.D.

1011 WALNUT STREET.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MAY 11, 1875, TO MAY 17, 1875, INCLUSIVE.

KINSMAN, J. H., ASSISTANT-SURGEON.—Assigned to duty at Fort Ripley, Minn. S. O. 83, Department of Dakota, May 11, 1875.

HEIZMANN, C. L., ASSISTANT-SURGEON.—Leave of absence extended three months. S. O. 89, A. G. O., May 12, 1875.

PAULDING, H. O., ASSISTANT-SURGEON.—Assigned to duty at Fort A. Lincoln, D. T. S. O. 78, Department of Dakota, May 6, 1875.